

Amendments to the Specification

Please replace page 5, line 1 - page 9, line 2 with the following paragraphs:

When it becomes necessary to install a reinforced window system generally designated **20**, a frame **24** having a general inverted L-like shape with a first arm **25** and a second arm **26**, is fitted within ~~with~~ an opening **16** by means of bolts **27**. In the present embodiment, frame **24** is entirely received within opening **16** though it will be appreciated that in other cases the frame may be partially fitted within the opening **16** and partially extending into the room space or, when there is only limited space at the opening, the frame **24** may be fitted on an inside portion of the wall, corresponding with the opening **16**.

As can further be seen in Fig. 2, second arm **26** of frame **24** is formed with a longitudinal receptacle recess **28** extending between two flanged portions **30** and **32**, the latter being shorter than the former for a reason to become apparent hereinafter. The first arm **25** of the frame **24** is formed with an inward projecting flange **36** slightly curved. An end of the first arm **25** of frame **24** is fitted with a groove **38** supporting a resilient sealing member **40**.

Fitted within receptacle ~~group~~ recess **28** there is a fixing member **46** having an anchoring flange portion **48** formed with a long leg portion **50** and a short leg portion **52** and adapted for insertion into receptacle ~~groove~~ recess **28** of the frame **24** by displacing it from the initial state illustrated by dashed lines into its final position in the direction of arrow **56** (Fig. 2B). The fixing member **46** has a hook-like flange **60**. A fixing member **46** may extend the entire length of each side of frame **24** or may be segments distributed therealong. Several securing bolts **62** are fitted at the fixing members distributed about the

frame 24 in a manner which will securely position and fix ~~the~~a support frame 68 within the frame 24. It is noted that not all the fixing members 46 are fitted with securing bolts 62, and the decision how many and where to fit such securing bolts 62, depends among others on considerations of the ability to absorb blast energy, foolproof mounting (see herein later), etc. Rather than bolts 62 there may be provided locking clamps.

The frame assembly as disclosed herein so far, constitutes a portion which is fixed at the opening 16. However, the window pane is removable and may be installed ad hoc, upon demand and may easily be removed, e.g. for maintenance thereof, for reaching the historic window 10 etc.

A window pane designated 64 is in accordance with an embodiment of the invention, a reinforced window consisting of two glass panes with a layer of resin laminate therebetween. However, it is appreciated that the window pane 64 may consist of several different layers and different thickness or may be a homogenous window pane made, e.g. of polycarbonate, imparting it ballistic-resistant. The window pane 64 is fixedly attached to a support frame 68 by an adhesive, e.g. low module silicone 70, in a manner wherein the window pane 64 is attached to the support frame 68 in a secure manner which will withstand also high shear forces. The arrangement is such that the attachment of window pane 64 to support frame 68 is designed to withstand high shear forces and not to detach. The adhesive material also plays a roll in initial dampening of some of the blast energy forces. However, other mechanic arrangements may suit for that purpose, as known *per se*.

Support frame 68 is integrally formed with an extension 76 which apart from imparting the support frame 68 a higher moment of inertia, it also serves for aesthetic reasons, whereby it conceals the engagement arrangement of the support frame 68 with the

frame 24. A concealing frame panel 80 is removably connected to extension 76 by bolts 62 82 (or by a suitable locking clamp) and may have different shapes to correspond with the shape and size of the opening in the wall.

Support frame 68 further comprises a receiving groove 84 fitted for receiving with a plurality of support members 88.

Turning now to a particular embodiment depicted in Figure 3, there is illustrated window pane 64 fitted within the support frame 68 where it is noticeable that support members are distributed along edges of the frame in pairs. Each pair consists of a wide support member 90 and a narrow support member 92, all having the same cross-section as support member 88 in Figure 2. The support members are slidably received within the groove 84 of support frame 68 and are fixed in place by various means as known *per se*, e.g. riveting, fixing bolts, etc.

The arrangement is such that the side frame members designated 68s are fitted with the larger support members 90 adjacent edges of the profiles 68 whilst the top and bottom support frames 68t and 68b are fitted with the narrow support members 92 adjacent the edges. This arrangement is adapted for an easy mounting of the support frame 68 within the frame 24 in a foolproof manner, whereby opposite one of the fixing members (each of the narrow fixing members 92, in the present example), there extends a securing bolt 62 of a fixing member 46. It is apparent that a myriad of positioning arrangements of the support members and the corresponding fixing members, as well as the distribution of the securing bolts, is possible. For example, support members 90 and 92 at one edge of the window, may be a unitary article. Further distinguishing may be accomplished by different color or other indications.

Reverting now to Figure 2, it is noticeable that the support member **88** is a bifurcated member having a first arm **90 94** and an opposed, longer arm **92 96** provided ~~within~~ with an extension ~~therefrom~~ **94 98**. In the assembled position of the window system, as in Figure 2, first arm **90 94** extends opposite flange **36** of frame **24** and the second arm **92 96** extends opposite the hook-like flange **60** of the fixing member **46**. Extension **94 98** is engageable by securing bolt **62** in a manner which fixes the support frame **68** and secures it in its place bearing against resilient seal sealing member **40**.

Thus, it appears that mounting and removing of the frame **68** with the window pane **64** is a simple procedure, whereby it is merely required to release bolts **62** and remove the fixing members **46**, whereby the support frame **68** may be removed. Assembly is obtained in a reverse sequence of operation.

A person versed in the art will appreciate that the number and size, as well as the distribution of the fixing members **46** and support members **88** may vary, depending on the purpose of the window and other considerations.

Furthermore, in order to render the window system also ballistic- resistance, the outward facing arm **25** of the frame **24** may be reinforced or covered by a bullet resistant cover, e.g. a steel frame or other resistant material, e.g. non-woven ballistic resistant material such as Kevlar™. Such bullet resistant material may be also applied at an inner side of that profile, so it is noticeable from the outside.

Figures 4A-4C illustrate three consecutive stages during a blast caused, e.g. by explosion **Ex** adjacent the building. At a first instance (Fig. 4A), upon occurrence of the explosion, it is highly expected that the historic window **10** breaks. Simultaneously, the blast encountering the outside face of window pane **64** causes it to slightly deform

inwardly, entailing deformation of support frame 68 in two directions, namely in a radial direction, i.e. parallel to the plane of the window pane 64, and in a plane orthogonal to the window pane, whereby the extension 94 98 of the support member 88 shears, or distorts along with the second arm 92 96, owing to pressure against the securing bolt 62.

As the window pane 64 continues to deform inwardly (Fig. 4B), the support frame 68 further deforms in the radial and orthogonal direction until one or both of the first arm 90 94 and second arm 92 96 of the support member 88 encounter flange 36 of frame 24 and the hooked flange portion 60 of fixing member 46. Further deformation of window pane 64 (Fig. 4C) results in deformation of one or both of the first arm 90 94 and the second arm 92 96 or, in extreme cases also, of shear thereof. In this manner the blast energy is wasted by converting it into mechanical deformation of the metal frame members.

It is to be appreciated that the support members and/or fixing members may be staggered so as to gradually engage one another, thereby providing increasing force dampening resistance. Also, the first arms 90 94 and 92 96, and the corresponding flanges 36 and hooked flanges 60, may be pre designed so as to gradually deform or sheer, depending on the required energy dampening effect. Different parameters may be controlled, e.g. length and thickness of the components, imparting them with reinforcement ribs or, contrary thereto, with sheer grooves, etc.

A person skilled in the art will not have any difficulty to understand that the size and shape of the first and second arms 90 94 and 92 96 and the ~~second~~ extension 94 98 of the ~~fixing support~~ member, as well as the size and shape of corresponding flanges 36 and hooked flange portions 60 may be designed to withstand different magnitudes of forces, taking into consideration the blast resistancy of the window pane.